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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/780,335

02/17/2004

Dong-Gyu Kim

8071-45 (OPP030501US)

1097

22150

7590

09/02/2005

F. CHAU & ASSOCIATES, LLC
130 WOODBURY ROAD
WOODBURY, NY 11797

EXAMINER

DUDEK, JAMES A

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/780,335

Applicant(s)

KIM ET AL.

Examiner

James A. Dudek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27, 41 and 43-47 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-12, 24, 26-28, 41 and 43-47 is/are rejected.
- 7) ☐ Claim(s) 5-7, 13-23 and 25 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 and 8-9 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US006753551B2 (“551”).

Per claim 1, 551 teaches a liquid crystal display, comprising: a first substrate [420] including a first electrode [1322 left side] and a second electrode formed thereon [1322 right side]; a second substrate [410] including a third electrode [1314] formed thereon, wherein the second substrate is spaced apart from the first substrate by a gap [see figures]; and at least one cutout formed in the third electrode, wherein the at least one cutout is aligned with a space between the first and second electrodes [see cutout shown in figure 13].

Per claim 2, 551 teaches the liquid crystal display as recited in claim 1, wherein the first electrode is a first pixel electrode, the second electrode is a second pixel electrode and the third electrode is a common electrode [see sixth embodiment].

Per claim 3, 551 teaches the liquid crystal display as recited in claim 1, wherein the gap includes a liquid crystal layer configured for housing liquid crystal molecules, and the at least one cutout includes a first edge aligned parallel to an edge of the first electrode and a second edge aligned parallel to an edge of the second electrode [see liquid crystal material in figure 13 and figure 8A].

Per claim 4, 551 teaches the liquid crystal display as recited in claim 3, wherein a component of an electric field generated between the third and the first and second electrodes for causing a change in tilt direction of the liquid crystal molecules aligns at least one of perpendicular to the first edge of the cutout, perpendicular to the second edge of the cutout,

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perpendicular to the edge of the first electrode and perpendicular to the edge of the second electrode [see sixth embodiment description].

Per claims 8-9, 551 teaches the liquid crystal display as recited in claim 1, wherein a voltage having an opposite polarity with respect to a voltage applied to the third electrode is applied to one of the first electrode and the second electrode and an electric field is generated between the first electrode and the second electrode [this limitation is merely intended use and does not add any additional structure, furthermore 551 is capable of being driving in this manner].

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 41 is rejected under 35 U.S.C. 102(e) as being anticipated by US006600539B2 (“539”).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Per claim 41, 539 teaches a liquid crystal display, comprising: a first substrate [100] including a first electrode and a second electrode formed thereon [120 left side, 120 right side]; a second substrate [200] including a third electrode formed thereon [210], wherein the second substrate is spaced apart from the first substrate by a gap [see figures]; and at least one cutout formed in the third electrode [211], wherein the at least one cutout includes a first edge aligned

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parallel to an edge of the first electrode and a second edge aligned parallel to an edge of the second electrode [see figure 5 and corresponding numbering].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10-11 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated by 551.

Per claim 10-12, 551 teaches the liquid crystal display as recited in claim 1, but lacks a plurality of data lines for transmitting data voltages formed on the first substrate, wherein the first and second electrodes are symmetrically disposed about at least one data line of the plurality of data lines for creating a non-varying parasitic capacitance between the first and second electrodes and the at least one data line across a plurality of shots of the first substrate. However, it was well known to form two transistors at each pixel for redundancy in order to increase yield. This would create a non-varying parasitic capacitance between the pixels. Accordingly it would have been obvious to one of ordinary skill in the art of the time of invention.

Per claim 24 and 26-28, 551 teaches the liquid crystal display as recited in claim 1, but lacks a plurality of drain electrodes formed on the first substrate, wherein the first electrode and the second electrode are respectively connected to a first drain electrode and a second drain electrode of the plurality of drain electrodes, and the first electrode and the second electrode receive data voltages from the first drain electrode and the second drain electrode, respectively. However it was well known to use redundant TFTs per pixel to increase yield. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of invention.

Claim 43-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over anticipated by 539.

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539 lacks the chevron shaped data lines and TFTs connected to each portion. However, it was well known in VA display art to use chevron shaped data lines in improve aperture ratio and to use redundant TFTs to improve yield. Accordingly it would have been obvious to one of ordinary skill in the art at the time of invention.

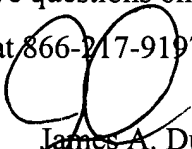
Allowable Subject Matter

Claims 5-7, 13-23, 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Dudek whose telephone number is 571-272-2290. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James A. Dudek
Primary Examiner
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